

# **C-A DEPARTMENT MAINTENANCE, MODIFICATIONS, AND REPAIRS SCHEDULE**

R. Zaharatos – Sept.14, 2000

## **SCHEDULE**

Maintenance Period - Begin: September 19, 2000 - 0800hrs.

Booster Ring Available For Maint.: September 25, 2000 - 1200hrs.

Maintenance Ends For: AGS/Booster - Dec. 18, 2000

RHIC - April 15, 2001

Machine Areas Access: Booster Restricted Access (begins Sept. 25)

AGS Restricted Access (begins Oct. 23)

All SEB Restricted Access

ATR/U Line Restricted Access

RHIC Restricted Access

Linac Restricted Access

### **AGS RING POWERED TESTING REQUESTS**

- C 1. Westinghouse(Oct. 2-23)
- C 2. Test new J10 Bump P.S..

### **Booster**

- C 1. Main Mag. rep rate cycle tests - Sept. 19-22
- C 2. F3 Kicker tests (requires ring access) - Sept. 20,21 evening

### **RHIC**

- C 1. RHIC quench tests (Sept. 19 - Oct. 4) – Finished 10/5/00 2300 hours
- C 2. Cryo tests (Oct. 6-7)
- RS 3. RF - Test 197mhz storage (Sept. 20 - Oct. 15) – Vac. Leak Tuner

### **PRIMARY JOBS**

JOBS STATUS CODE: **C** complete **IP** in-process **RS** reschedule **CAN** cancelled  
\* Additions

NOTE: There will be extensive maintenance on power sub-stations requiring power outages from 1 to 2 days each. A detailed schedule will be issued.

### **AGS RING**

- C 1. Complete installation of J10 Beam Dump positioning controls and temp. monitor
- RS 2. Transverse Dampers - retube and upgrade control system.
- C 3. RF - install gap short relays
- C 4. RF - install new flow meters on all PA's
- RS 5. Install RF Dipole
- RS 6. Installation of new Tune Meter
- C\* 7. Survey all 72 PUE's

### **AGS EXTERNAL EQUIPMENT**

- IP** 1. Siemens Motor/Gen. rebuild
- C** 2. Siemens/Westinghouse buss modifications
- C** 3. External capping of E20 area.

### **BOOSTER RING EQUIPMENT**

- C** 1. Install new F6 Septum. Swap out F6 quarter cell and F7 half cell.

### **BOOSTER EXTERNAL EQUIPMENT**

- C** 1. Booster Water System - controls upgrade
- C** 2. Install and test new Booster timing system (930A, 930UEB, 911B, and 914)
- C** 3. Station upgrade to VME Controllers (930A,930UEB, and 914(requires long interruptions)

### **LINAC**

- C** 1. Replace 930 Chiller

### **RHIC**

- IP** 1. Install Snakes in sectors 3 and 9
- IP** 2. Install Crystal Collimator in sect. 7
- IP** 3. Beam Loss Monitor System - repairs, upgrade, and new installations(ex. polarimeter)
- IP** 4. Commission 150A Bipolar P.S.'s in 1002,4,8,12
- IP** 5. Test and install new 300A Bipolar P.S.'s
- C** 6. Grout floor to wall joints in Sect. 11
- IP** 7. Installation of polarimeters in Sect. 12
- IP** 8. Gamma TR - install and test
- C** 9. Repair internal leak in 6 o'clock valve box
- IP** 10. Install PLC remote restart in 42 ring cryo cabinets
- IP** 11. Check all recooler valve seats and stems and replace leaking valve seats
- C** 12. Install HE Refrigerator in 1006B
- IP** 13. Complete the installation of 197Mhz RF system in common area

### **SEB Switchyard**

- C** 1. Install new current transformer at CST036
- C** 2. Replace CE010 SEC with Ion Chamber for FE26 run.
- C** 3. Replace damaged electrical cables in Target Bldg.

### **G-2/U Line/ATR**

- C** 1. V Tgt. set-up for G-2 Exp. 821
- C** 2. Proton Radiography set-up for Exp. 933
- C** 3. G-2 - repair quad plate in kicker chamber
- C** 4. Power Dist. - install new duct bank under U Line

## **DETAILED SCHEDULE**

Sept. 5	0800	HI for RHIC ends
Sept. 5-19		Polarized Protons Commissioning into RHIC (Blue Ring only)
Sept. 19-22		Booster BAF Studies (Main Mag. rep rate cycle testing)
		Begin Shutdown for AGS and RHIC
Sept. 19-23		STAR - Install and test new TPC Controls
Sept. 19-25		Siemens Motor/ Gen. disconnect and prep for removal and off-site transport
Sept. 19-Oct. 2		Westinghouse buss modifications
Sept. 19 - Oct. 4		RHIC P.S. testing including quench tests (Ganetis)
Sept. 20 - Oct. 15		RF commissioning for 197mhz operation (Section 4 Controlled Access)
Oct. 2-23		Westinghouse testing (AGS Ring secured)
Oct. 16 - Nov. 15		Linac chiller installation
Oct. 6-7	RHIC	Cryo tests(simulate refrigerator fail/recovery)
Oct. 9-13	RHIC	Transfer Helium inventory offsite
Oct. 14-18	RHIC	Isolate and warm-up Sectors 3B and 9Y, then 3Y and 9B
Oct. 18	RHIC	Begin RHIC main beam tube openings at Sectors 3 and 9
Oct. 20-26	RHIC	Isolate and warm refrigerator and shutdown compressor.
Oct. 27-31	RHIC	Warm balance of ring
Nov. 1-6	RHIC	Ring safety isolation. Establish N2 purge for open and closed Sextants.
Oct. 16 - Nov. 8		Bldg. 928 - Install new Chiller
		Replace 928 roofing
Nov. 9 - Jan.31	RHIC	Installation of Snakes
	RHIC	Installation of yellow ring polarimeter in Sect. 12
	RHIC	Installation of Crystal Collimator in Sect. 7
Nov. 27-Dec. 18		Booster F6 Septum and F7 Half Cell installation (includes bakeout)
Dec. 11 - Jan. 26		RHIC - painting of entire tunnel floor plus beam components in Sectors 3,4,8,9,10, and 11(day and evening shifts)
Dec. 15		G-2 cryo start-up
Dec. 18-22		AGS/Booster equipment turn-on/check-out by MCR
		AGS Main Mag. heat run
Jan. 2		AGS set-up for NASA
Jan 5 - 19		NASA Run
Feb. 1-28		25GEV FEB
Apr. 1		Begin RHIC cool-down
May 1		RHIC start-up with beams



**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Accelerator Controls – B. Venegas (ext. 3917, BP 7241), W. Buxton (ext. 4053)**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
<b>C</b> 1	930A, 930UEB and 914	120 hrs.	Station upgrade to VME controllers	None	None
<b>C</b> 2	930A, 930UEB, 911B and 914	120 hrs.	Install and test new Booster timing system. Reprogram PLD's in controllers.	None	None
<b>IP</b> 3	F18	80 hrs.	Install new damper controls	None	None
<b>IP</b> 4	1008B and RHIC Ring	16 hrs.	Install equipment and terminate F/O cables for Crystal Collimator	None	None
<b>C</b> 5	3C, 5C, 7A, 7C and 9A, 9C	120 hrs.	Install waveform generator boards, Lo Res modules and F/O cables for Spin (Snake) whatever they call it.	None	None
<b>C</b> 6	1005E & 1007W	16 hrs.	488 control of scope and DDG 535 mod	None	None
<b>IP</b> 7	1003B Alcove	1 hr.	Replace AC power reset module for 3b-ps1 and test.	None	None
<b>C</b> 8	1004A	4 hrs.	Install and test new Switch Reference module. (Tom Kerner).	None	None
<b>C</b> 9	911B	120 hrs.	AGS Beam Inhibit system (Rob Michnoff)	None	None
<b>IP</b> 10	1004b	24 hrs.	RTDL Upgrade and Testing	All that use RTDL	None
<b>C</b> 11	All controls multibus locations	120 hrs.	Replace multibus chassis P.S. connectors		
<b>C</b> 12	AGS/RHIC	120 hrs.	Update all V108 & V113 modules in VME Chassis.	None	None
<b>IP</b> 13	RHIC Alcoves & Service Bldgs.	40 hrs.	Install new modicon P.S. interface modules	None	None

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Access Controls – D. Meany (ext. 5329), BP 0361), N. Williams (ext. 5346, BP 0554)**

For Maintenance Period: September 19, 2000

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<b>IP 1</b>	RHIC Ring	2 wks.	Check and recalibrate ODH sensors		
<b>IP 2</b>	RHIC Ring		Install displays on GI, and GE Gates, 1GS1 Gate	Electricians	
<b>C 3</b>	Repair 8GE1 gate	2 days	Rewire all switches on gate		
<b>C 4</b>	1004A	2 wks.	Install modification to RF PS interlocks		
<b>RS 5</b>	Bldg. 921	3 wks.	Redo wiring to PLC Cabinets, add grounds		
<b>C 6</b>	Booster	3 days	Annual Security Testing		
<b>C 7</b>	AGS Ring	3 days	Annual Security Testing		
<b>C 8</b>	Swyd	3 days	Annual Security Testing		
<b>C 9</b>	A Line	2 days	Annual Security Testing		
<b>C 10</b>	U Line U/D	3 days	Annual Security Testing		
<b>IP 11</b>	RHIC Tunnel	5 wks.	Annual Security Testing		
<b>C 12</b>	1012, 1010, 1006, 1002		Install UPS at 1010, 1006, 1002		
<b>C 13</b>	Bldg. 921		Install UPS in B Div, in Peers 3, 23, 25		
<b>C 14</b>		3 wks.	Install UPS transfer switches for on line UPS's	Electricians	
<b>C 15</b>	Swyd D/S Gate	16 hrs.	Replace slide bolt with electric strike		
<b>C 16</b>	Swyd U/S Gate	16 hrs.	Replace slide bolt with electric strike		
<b>C 17</b>	Swyd East Gate	16 hrs.	Replace slide bolt with electric strike		

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Beam Components & Instrumentation: D. Lehn (Ext. 4095 [4276], T. Russo (Ext. 7330 [4201])**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
<b>IP 1</b>	RHIC	80 hrs.	Crystal Collimator - Sector 7 a) Installation and setup of Crystal Collimator. b) Installation setup and test of laser/video system. c) Installation and setup of Fiber Link Cable.	Vacuum Group Survey Group Cable Crew	
<b>IP 2</b>	RHIC	80 hrs.	Beam Scrapers - Sector 7 a) Installation of external RTD cable. b) Setup and test of video system. c) Swap out of flag with new version. d) Setup thermocouples for copper blocks.	Survey Group Cable Crew Vacuum Group	
<b>IP 3</b>	RHIC	TBD	Polarimeters - Sector 12 a) Installation of second polarimeter. (Blue) b) Installation of necessary cables for second polarimeter. c) Modifications as necessary to Yellow Polarimeter.	Survey Group Vacuum Group Spin Group Cable Crew	
<b>IP 4</b>	RHIC	240 hrs.	Beam Loss Monitor System a) Sector 4 - Terminate cables at Triplet. - Rearrange HV Strings. b) Sector 5 - Terminate and setup cables for Spin Rotators. - Rearrange HV strings. c) Sector 9 - Rearrange HV strings. d) Sector 11 - Install replacement cable for 11Q18. e) Sector 12 - Install 2 loss monitors for new Polarimeter. f) All sectors - Pull in spare cables from houses to Q12 area. g) All sectors - Full checkout of system.	Cable Crew	
<b>C 5</b>	A-Line	240 hrs.	E-947 - NASA a) Complete the reinstallation of all equipment for experiment. b) Fully setup and test all necessary equipment.	CAS	
<b>IP 6</b>	A-Line	320 hrs.	E951 - Muon Collider a) Complete installation of all new equipment for experiment. b) Fully setup and test all necessary equipment.	CAS	
<b>C 7</b>	C-Line	320 hrs.	E938 - Neutron Spallation a) Complete installation of all new equipment for experiment. b) Fully setup and test all necessary equipment.	Survey Group EAG, HP Survey	

<b>C</b>	8	C-Line	40 hrs.	E949 a) Complete modifications for upcoming experiment.	Survey Group, EAG, HP Survey	
<b>C</b>	9	D-Line	40 hrs.	E930 a) Checkout equipment for upcoming experiment.	HP Survey	
<b>C</b>	10	U-Line	80 hrs.	E933 - Proton Radiography a) Complete modifications for upcoming experiment. b) Fully setup and test all necessary equipment.	HP Survey	
<b>IP</b>	11	V TGT Blockhouse	40 hrs.	E821 - g-2 a) Replace VW325 SWIC b) Replace VE324 SEC c) Replace cables and gas lines for above. d) Test all of above equipment. e) Removal/replacement of dosimetry copper cube.	HP Survey	<b>RWP</b>
<b>C</b>	12	AGS Ring	20 hrs.	CST036 Scanning Target a) Remove Target box. b) Remove Horizontal and Vertical PMT stands. c) Remove electronics from TBH East.	HP Survey, Vacuum Group	
<b>C</b>	13	AGS Ring	80 hrs.	Current Transformer (Where CST036 was) a) Install new Current Transformer b) Install all new cables for above. c) Install electronics at TBH East and test into ring. d) Remove old cables from tray.	HP Survey, Riggers, Cable Crew, Vacuum Group	
<b>C</b>	14	AGS Ring	20 hrs.	F5 Camera a) Installation of cable for new rad hard camera. b) Installation of new rad hard camera and mount.	HP Survey, Cable Crew, Riggers	
<b>C</b>	15	AGS Ring	40 hrs.	IPM's a) C-5 - Replace servo valve b) E-15 - Replace servo valve c) E-15 - Replace video viewport d) Test above servo's e) C14 Alcove - Clean out unused equipment. f) Move electronics out to B18 House.	HP, Survey Vacuum Group Cable Crew, Riggers, Elect.	
<b>C</b>	16	AGS Ring	80 hrs.	J10 Beam Dump a) Install interface chassis in J18 House. b) Install motion control crate in J18 House. c) Test Motion of Beam Dump in ring. d) Calibration of positioning. e) Build, test and install temperature controllers.	HP Survey	
	17	AGS	8 hrs.	C Fan House Proportional Chamber a) Make temporary cables permanent. b) Run new cables from J18 to I18	Cable Crew	
<b>RS</b>	18	AGS	240 hrs.	Transverse Beam Dampers a) Retube 2 Amplifiers b) Perform upgrade/modifications to control system.	Controls Group	
<b>C</b>	19	AGS Ring	40 hrs.	H20 Septum a) Setup and test flag b) Setup and test flag video c) Test Septum (H.V. Testing) **	HP Survey	



			d) Calibration of positioning.	
<b>C</b>	20	AGS Ring	120 hrs. RC'S/DCCT'S a) Inspect and replace RC's as necessary. b) Inspect DCCT's and replace as necessary. c) Inspect for grounds as necessary.	HP Survey
<b>C</b>	21	AGS Ring	8 hrs. UF1 a) Install and setup High Intensity Dage Camera.	HP Survey
<b>C</b>	22	AGS	40 hrs. Beam Inhibit System a) Tie in loss monitors as required. b) Test loss monitors for trips.	Controls Group
<b>C</b>	23	Booster Ring	40 hrs. LTB Harp a) Install new Harp. b) Install and test electronics for new harp. c) Installation of necessary cabling. d) Support bakeout if necessary.	HP Survey, Vacuum Grp., Controls Grp., Cable Crew
<b>C</b>	24	Booster Ring	40 hrs. SNS Test - Fiber Optic Loss Monitor System a) Installation of fiber optic cable in tune. b) Installation and testing of electronics.	HP Survey, Controls Group Cable Crew
<b>C</b>	25	Booster Ring	80 hrs. SNS Test - RHIC Type Loss Monitor a) Installation of cable for loss monitors. b) Installation of loss monitors (4). c) Installation and test of electronics.	HP Survey Controls Group Cable Crew
<b>RS</b>	26	Booster Ring	40 hrs. SNS Test - Liquid Scintillators a) Installation of cable for liquid scintillators. b) Installation of liquid scintillators. c) Installation and test of electronics.	HP Survey, Controls Grp., Cable Crew
<b>C</b>	27	Booster Ring	40 hrs. SNS Test - Pin Diode Loss Monitor System a) Installation of cable for Pin Diodes. b) Installation of Pin Diodes. c) Installation and test of electronics.	HP Survey, Controls Group Cable Crew
<b>C</b>	28	Booster Ring	40 hrs. BTA Flag (SNS) a) Installation of cable for BTA flag. b) Installation of camera/mount/filters. c) Installation and test of electronics. d) Support bakeout if necessary.	HP Survey, Survey Group Vacuum Grp., Controls Grp., Cable Crew
<b>C</b>	29	Booster Ring	40 hrs. F6 Flag (SNS) a) Installation of cable for F6 Flag. b) Installation of camera/mount/filters. c) Installation and test of electronics. d) Support bakeout if necessary	HP Survey, Survey Group Vacuum Group Controls Group Cable Crew
<b>C</b>	30	Booster Ring	80 hrs. TTB 29/141 Rack a) Pull in cables for new location. b) Move rack to new location. c) Setup and test rack at new location.	HP Survey, Controls Grp., Cable Crew
<b>C</b>	31	Booster Ring	8 hrs. TTB 29/141 Harp a) Inspect Harp for rad damage and repair as necessary.	HP Survey,

<b>RS</b>	32	AGS Ring	16 hrs.	A20 PMT a) Install new high intensity PMT. b) Setup for dual operation with low intensity PMT. c) Setup and test electronics. d) Remove Beam Loss Monitor.	HP Survey, Controls Grp.
<b>C</b>	33	AGS Ring	2 hrs.	PUE Pre-amps (F20 & G7) a) Remove, test and reinstall in designated configuration.	HP Survey
<b>IP</b>	34	C-Line	320 hrs.	LESB 3 Separator a) Rebuild/Upgrade separator. b) Reinstall Separator and all associated equipment. c) Test Separator and all associated equipment. d) Condition Separator as necessary.	HP Survey, Riggers, EAG
<b>IP</b>	35	C-Line	120 hrs.	LESB 2 Separator a) Change all necessary instrumentation. b) Replace all rad damaged cabling. c) Test Separator and all associated equipment. d) Reassemble power supply platform. e) Condition Separator as necessary.	HP Survey, Riggers, EAG
<b>IP</b>	36	D-Line	TBD	2 GEV Separator a) Test all instrumentation, repair/replace as necessary b) Test Separator and all associated equipment. c) Condition Separator as necessary.	HP Survey
<b>IP</b>	37	RHIC	TBD	Injection Kickers a) Construct new kicker magnets b) Replace magnets with upgraded magnets.	
<b>C</b>	38	Booster Ring	TBD	BAF Test a) Install monolithic aluminum windows.	HP Survey
<b>C</b>	39	AGS Complex	16 hrs.	Setup necessary equipment for Fe26 running.	
<b>C</b>	40	Switchyard	40 hrs.	SWITCHYARD flags a) Perform maintenance on all flag drives. b) Repair known failed flag drives (DF146,DF364)	HP Survey
<b>C</b>	41	AGS Ring	8 hrs.	Ring Cameras a) Inspect and checkout all ring cameras. b) Repair/replace as necessary.	HP Survey
<b>C</b>	42	AGS Complex	80 hrs.	Video System a) Cleanup/remove old equipment. b) Cleanup/Test/Modify system as necessary.	
<b>C</b>	43	ATR Line	40 hrs.	Flag Profile Monitors (AGS Ring/ATR/RHIC) a) Inspect and adjust video alignment as necessary. b) Inspect and modify solenoids as necessary.	HP Survey
<b>C</b>	44	Booster Ring	TBD	F6 Septum a) Build and test new septum. b) Install new septum	HP Survey
<b>C</b>	45	Booster Ring	TBD	F7 Half Cell a) Swap out existing half with spare (Rad hard coils).	HP Survey
<b>C</b>	46	Booster	TBD	F6 Quarter Cell	HP Survey

		Ring		a) Swap out existing quarter cell with spare.	
<b>C</b>	47	Booster Ring	TBD	Bakeout support for all above F Sector work.	HP Survey
<b>C</b>	48	Booster Ring	40 hrs.	Booster Grounds a) Test and inspect grounds (Repair as necessary).	HP Survey
<b>C</b>	49	Booster Ring	40 hrs.	RLRM Gas Manifold (While F6 Septum is removed) a) Investigate large gas leaks (BTA). b) Repair/Modify as necessary.	HP Survey
<b>C</b>	50	AGS RING	4 hrs.	CE010 SEC a) Replace with Ion Chamber for Fe26 running.	HP Survey
<b>RS</b>	51	AGS Ring	TBD	Tune Meter - Horiz. & Vertical a) Build new Tune Meter Kickers b) Test new Kickers. c) Install new Kickers.	HP Survey Pulsed Power
<b>IP</b>	52	AGS Ring	TBD	F10 Septum a) Build new Septum. b) Test new Septum. c) Install new Septum.	HP Survey, Power Supply
<b>C</b>	53	Booster	20 hrs.	C6 Foil Stripper a) Install new controller. b) Test and commission new controller.	Controls Group
<b>C</b>	54	Booster	20 hrs.	BTA Foil Stripper a) Install new controller. b) Test and commission new controller.	Controls Group
<b>C</b>	55	AGS Ring	4 hrs.	F10 Video a) Remove old video equipment.	HP Survey
<b>RS</b>	56	AGS	16 hrs.	A20 MW a) Design, install and test remote lockout for actuator.	Access Controls
<b>C</b>	57	AGS Ring	TBD	A20 Current Transformer a) Removal of all covers. b) Design and construction of capacitor ring. c) Installation of above ring. d) Test and reinstallation of covers	HP Survey
<b>C</b>	58	AGS Ring		Backflush F5 and F10 Septum Magnets	
<b>C</b>	59	LTB		Repair cables for LTB MW035 Harp	
<b>C</b>	60	Booster		Replace cables for LTB MW107 Harp	
<b>C</b>	61	AGS		Modify Current transformer controls a) New Current Intensity Digitizers b) Modified signal distribution c) Installed PPM capability	
<b>C</b>	62			Installed A1 Primary Gate Video Security System	
<b>C</b>	63			Modified PMT setup for Polarized Protons	
<b>C</b>	64			Replaced VF232 Camera	
<b>C</b>	65			Installed Electron Detector cables for SNS Tests	

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**JOBS SCHEDULING REQUEST**

**GROUP: Collider Mechanical – S. Seberg (ext. 7313), BP 4136), G. McIntyre (ext. 7307, BP 0503)**

For Maintenance Period: September 19, 2000

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<b>IP 1</b>	Sec 9 RHIC		Install Snake 10/18/00 to 12/18/00		
<b>IP 2</b>	Sec 3 RHIC		Install 2 Snakes 10/20/00 to 1/29/01		
<b>C 3</b>	6 O'clock Valve Box		Repair Internal Leak 10/27/00 to 1/31/01		
<b>IP 4</b>	7 O'clock RHIC Tunnel		Install & Survey Crystal Collimator		
<b>C 5</b>	4 O'clock Block House		Remove Shield Block on R/H/S to allow for Magnet Transport	Riggers	
<b>C 6</b>	8 O'clock Wing Tunnel		Remove Shielding Block on R/H/S of Phoenix to allow for Magnet Transport.	Riggers	
<b>C 7</b>	4 & 8 O'clock		Reinstall Shielding Block at 4 & 8 O'clock	Riggers	

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Collider PS/Magnet Protection – R. Zapasek (ext. 2189), BP 4263), J. Sandberg (ext. 4682, BP 4256)**

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IP 1	R Ring		SEXTUPOLES, change polarity of yellow sextoples.	D. Bruno	
C 2	Service Bldgs.		150A BIPOLARS, move LEM change bus	W. Eng	
IP 3	Service Bldgs.		150 BIPOLARS, Commission PS'S in 1002, 4,8,12	W. Eng	
IP 4	Service Bldgs.		300A BIPOLARS, Test and Install	W. Eng	
IP 5	Service Bldgs.		POWER SUPPLIES, QPAS, Clean all fans filters,	J. Sandberg	
IP 6	Alcoves		GAMMA TR, Test and install	J. Mi	
IP 7	Alcoves		SEXTUPOLES, Maint. on blue supplies,	D. Bruno	
IP 8	Service Bldgs.		DYNAPOWER PS'S, Maintenance	D. Bruno	
C 9	1004B		RACKS, Install filters	D. Bruno	
C 10	ATR		ATR PS'S, Maintenance	D. Bruno	

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Cryogenic Systems – R. Picinich (ext. 3172, BP 4145) A. Nicoletti (ext. 3961, BP 7107)**

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<b>IP 1</b>	Sector 9 Y&B	40 hrs.	Install lead flow controllers & plumbing	N/A	
<b>IP 2</b>	Sector 3 Y&B	40 hrs.	Install lead flow controllers & plumbing		
<b>C 3</b>	All Sectors	320 hrs.	Check all recoolers valves (seats & stem seals)		
<b>C 4</b>	Sector 3	40 hrs.	Repair valve stem of yellow & blue		
<b>IP 5</b>	All Valve Boxes	320 hrs.	Replace leaking recoolers valves, valve seats		
<b>IP 6</b>	Sectors 9 Y&B	40 hrs.	Pressure check snake magnet		
<b>IP 7</b>	Sectors 3 Y&B	40 hrs.	Pressure check snake magnet		
<b>IP 8</b>	Sector 5	40 hrs.	Press check Lead repair		
<b>IP 9</b>	Sector 5		Change size of air line & route, another air line out to Refrigerator.	Plumbers	
<b>IP 10</b>	All Sectors	80 hrs.	Hook-up air to all warm return isolation valves.		
<b>C 11</b>	1006 B	320 hrs.	Installation Helium Refrigerator.	Carpenters Riggers	

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Cryogenic Systems Controls – B. Kollmer (ext. 4479, BP 7106) A. Nicoletti (ext. 3961, BP 7107)**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
<b>IP 1</b>	RHIC Ring	2 mths.	Install PLC restart circuitry in 42 cryo ring cabinets	Cable Pulling	
<b>IP 2</b>	RHIC Ring	1 mth.	Install lead flow manifold Rtd. temperature sensors at 42 Ring cabinets.		
<b>IP 3</b>	Sext. 2/3 & 8/9	2 wks.	Install Cryo Instrumentation & Lead flow controls		
<b>IP 4</b>	Inside Ring @ 2SB, 10SB & 12SB	1 wk	Complete wiring @ the warm helium Return Isolation Valves located inside tunnel near the 2, 10 & 12 service buildings.		

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: G-2 – J. Benante (ext. 2745) (1207)**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
C 1	919	1-2 months	Repair quad plate in kicker chamber		
C 2	919	80 hrs.	Modify trolley drive box		
C 3	919	40 hrs.	Inspect batmans in quad chambers		





**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: LINAC – B. Briscoe (ext. 5007, 5010, BP 4225) J. Alessi (ext. 7563)**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
RS 1	Linac	40 hrs.	Change Ion Pumps in tank 6 6-1, 6-6	Vac.	SS00002S
RS 2	Linac	40 hrs.	Change Ion Pump in tank 1 1-4	Vac.	SS00002S
RS 3	None	80 hrs.	Remove Mod 4 7835 PS for repair	None	None
RS 4	None	40 hrs.	Replace Mod 1 7835 PS with Dynapower	None	None
C 5	Linac	40 hrs.	Check all tank tuners.	None	SS00002S
RS 6	Linac	40 hrs.	Install multiwire in HEBT for Pol.	Vac.	SS00002S
C 7	None	720 hrs.	Finish Maintenance Items	None	None
C 8	None	20 hrs.	Replace chiller	Plant Eng.	None
C 9	None	16 hrs.	Shut off substation 2L	Electricians	None
C 10	None	40 hrs.	Complete install of BM4 PS and Test	None	None
C 11	None	40 hrs.	Readjust local control of datcon and test.	None	None
C 12	None	80 hrs.	Finish SNS foil tests in LEBT	None	None
C 13	None	80 hrs.	Set up new SNS laser test in LEBT	None	None
C 14	None	40 hrs.	Install new steering supplies in Pol LEBT	None	None
RS 15	None	40 hrs.	Install and test Pulse PS for LEBT BM	None	None
C 16	None	80 hrs.	Replace all Iggy sockets and rehouse	None	None
C 17	None	20 hrs.	Test new dielectric feed loop	None	SS00002S
RS 18	None	40 hrs.	Install new circulator for RFQ	None	None
RS 19	None	40 hrs.	Calibrate RF Amp & Phase System	None	None
RS 20	None	80 hrs.	Put tank Ion Pumps on Control System	None	None
RS 21	None	40 hrs.	Install controls for resetting Ion Pumps.	None	None
RS 22	None	40 hrs.	Complete installation of new SS Chopper	None	None
RS 23	None	120 hrs.	Add new Malf. bucket to BLIP and Rewire	None	None
RS 24	None	2 hrs.	Set Mod 8 7835 input tuning limits	None	None
RS 25	None	40 hrs.	Repair BLIP 1 <sup>st</sup> multiwire	Vac.	SS00002S
RS 26	None	200 hrs.	Modify 7835 input tuner with Fermi Design	None	None

<b>RS</b>	27	None	80 hrs.	Complete construction of SS modulators	None	None
<b>C</b>	28	None	40 hrs.	Replace switches & pots in tank water control	None	None
<b>RS</b>	29	None	80 hrs.	Install ACME supply for HEBT 2 Quad	None	None
<b>RS</b>	30	None	120 hrs.	Add water cooling to 7835 supplies	None	None
<b>RS</b>	31	None	80 hrs.	Add flow switch interlock to 7835 water	None	None
<b>RS</b>	32	None	80 hrs.	Make new LEBT solenoid	None	None
<b>RS</b>	33	None	40 hrs.	Make new solenoid pulser supply	None	None
<b>C</b>	34	None	40 hrs.	Check bunchers for sparking and recable	None	None
<b>C</b>	35	None	4 hrs.	Change GND switch GND in Cap Bank Mod 5	None	None
<b>C</b>	36	None	4 hrs.	Add spark gap to cap bank low side	None	None
<b>RS</b>	37	None	8 hrs.	Install flow switches on Pol. Bms.	None	None
<b>C</b>	38	None	40 hrs.	Repair valve and Cryo in pol. LEBT Box	None	None
<b>C</b>	39	None	40 hrs.	Tighten stabline control Mod 7	None	None
<b>C</b>	40	None	8 hrs.	Check Mod 4 Driver HV SCR Control	None	None
<b>C</b>	41	None	20 hrs.	Replace all local switches in LEBT controls	None	None
<b>C</b>	42	None	4 hrs.	Replace IGGY 4A	None	None
<b>C</b>	43	None	4 hrs.	Replace IGGY 9B	None	None
<b>C</b>	44	None	4 hrs.	Repair Tank 1 Faraday Cup	None	None
<b>C</b>	45	None	4 hrs.	Check HEBT Control of NQ68 & NQ82	None	None

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: MAIN RING POWER SUPPLY SYSTEMS: M. Bannon (Ext. 7704) [4224], I. Marneris**  
**(Ext. 7027) [4255]**

For Maintenance Period : September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
<b>IP</b>	1		<b>SIEMENS</b> - Motor Gen. Rotor removal		
<b>C</b>	2		<b>SIEMENS</b> - Maintenance		
<b>C</b>	3		<b>SIEMENS</b> - Install bus for Westinghouse MG Set run.		
<b>C</b>	4		<b>SIEMENS</b> - Install and test new switch gear (CB 52, 52R, 19R, 19S)		
<b>RS</b>	5		<b>SIEMENS</b> - Install UPS for Cycloconverter Rack.		
<b>C</b>	6		<b>SIEMENS</b> - Test motor brake power supply relay logic for motor braking timeout.		
<b>IP</b>	7		<b>SIEMENS</b> - Replace suspect faulty relays (A31d3 in LA2 for one).		
<b>IP</b>	8		<b>SIEMENS</b> - Backup Simadyn PLC software for Siemens cycloconverter.		
<b>C</b>	9		<b>WESTINGHOUSE</b> - Install PT on liquid rheostat for motor power monitoring.		
<b>C</b>	10		<b>WESTINGHOUSE</b> - New generator feedback chassis install and test.		
<b>C</b>	11		<b>WESTINGHOUSE</b> - Install new kirk lock scheme at West and Siemens.		
<b>IP</b>	12		<b>WESTINGHOUSE</b> - Install wiring for new battery band and charged for Westinghouse.		
<b>RS</b>	13		<b>AGS</b> - Inspect water fittings in L18A house inside PPA power supplies.		
<b>C</b>	14		<b>AGS</b> - Run and test new J10 Power Supply into the real load in the AGS Ring.		<b>RWP required</b>
<b>IP</b>	15		<b>AGS &amp; RHIC UPS'S</b> - Do maintenance on UPS's. including battery checks, monitor TP, clean up unit, etc.		
<b>C</b>	16	<b>AGS</b>	Heat Run using Westinghouse MG Set		
<b>RS</b>	17		<b>BOOSTER</b> - Do final PPMR commissioning with LIPA testing and acceptance.		

**Continued: Power Supply**

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
C 18			<b>BOOSTER</b> - Inspect and repair transformer wire grommets inside control box of BMMPS trans.		
C 19			<b>BOOSTER</b> - Install new LEM's inside 95 switches.		
C 20			<b>BOOSTER</b> - Replace F7 and F6 1/2 cell and 1/4 cell in Booster Ring.		
C 21			<b>BOOSTER</b> - Inspect BMMPS and general maintenance.		
C 22	Booster		Megger – Hi-pot and heatrun		

**UPS SYSTEMS BATTERY MAINTENANCE AND CLEANING**

C 1		UPS-B914
C 2		UPS-B914-Security
C 3		UPS-B919 (G-2)
C 4		UPS-911B
C 5		UPS-Siemens Cycloconverter (basement)
C 6		UPS-SMS (Siemens Basement)
C 7		UPS-A10
C 8		UPS-H10
C 9		UPS-E10
C 10		UPS-B930 (Booster Bldg. 930A)
C 11		UPS-L930A (Linac Basement)
C 12		UPS-911 (MCR)
C 13		UPS-Cyberex (Security)
C 14		UPS-EAO-A
C 15		UPS-RF-1 (929)
C 16		UPS-RF-2 (929)
C 17		Clean or replace air filters on all UPS's.
C 18		Biddle check the battery impedance on all UPS batteries.
C 19		Order 50 new YUASA NP24-12B for the RHIC controlled power UPS's.

C 20 1002B - Replace with new 6kVA Mitsubishi UPS

**Continued: Power Supply**

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
C 21			UPS-Controlled power MD# MD3500 Bldg. 1004B		
IP 22			UPS-Controlled power MD# MD3500 Bldg. 1008B		
C 23			UPS- 1010A Replaced with 6 kVA Mitsubishi		
C 24			UPS-Controlled power MD# MD3500 Bldg. 1012A		
IP 25			UPS-Controlled power MD# MD3500 Bldg. 1005S		
IP 26			UPS-Controlled power MD# MD3500 Bldg. 1005R		
IP 27			UPS-Controlled power MD# MD3500 Bldg. 1005H		
IP 28			UPS-Mitsubishi MD# 700-60 Bldg. 1006B		
IP 29			UPS- Mitsubishi MD# 2033C Bldg. 1000P		

**WESTINGHOUSE**

C 1			Finish construction of Westinghouse controls and start to test.		
C 2			Complete testing and start MG set.		
C 3			Excite Westinghouse generator.		
C 4			Use Westinghouse MG set to power AGS Ring Magnets.		
C * 5			Hooked up new battery charger to battery bank for Westinghouse.		
C * 6			Write a turn on procedure for Westinghouse MG Set.		

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Maintenance Support: R. Zaharatos (Ext. 7205 [4281], J. Benante (Ext. 4498(1207),**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
C 1	AGS Ring	4 hrs.	Inspection of enclosure and equipment	Ray Z./John B.	
C 2	911 Pump Room	16 hrs.	Chiller PM P085304	Ray Z/ PE-McKay	
C 3	Cooling Twr. 1	8 hrs.	PM's - Fan motor, spray headers, level float, etc. P083433	Ray Z./ PE-McKay	
C 4	913A Fan House	5 hrs.	Replace supply fan #1	Ray Z/ PE-McKay	
C 5	913A-E		AGS Ring Fan Houses PM's	Ray Z./PE-McKay	
C 6	AGS A10		Install new compressor in A10 House	Ray Z., PE-McKay	
C 7	AGS	6 hrs.	<u>Grass cutting</u> - Ring road, escape areas and cable trays. Bldg. 921 cable trays. ATR Berm.	Ray Z., Grounds Maint.	
RS 8	913B&C Fan Houses	4 hrs.	Apply seal coat to sumps	Ray Z. - PE-Lawrence	
RS 9	913	40 hrs.	Install external pump out lines to South and C14 sumps.	Ray Z. - PE - G. Barnett	
C 10	913	8 hrs.	Relamp tunnel	Ray Z., Bernier	
C 11	913	8 hrs.	Grout ceiling at H5	Ray Z., - PE	
C 12	913	36 hrs.	Cap outside tunnel ceiling at E20	Ray Z., PE - Feldman	
RS 13	913	40 hrs.	Repairs to outdoor cable tray network	Ray Z., - Bernier	
C * 14	AGS		Survey all 72 PUE's		
C 15	Booster	2 hrs.	Inspection of enclosure and equipment	Ray Z./John B.	
RS 16	Booster Berm	8 hrs.	Grass cutting, tree trimming, and brush removal	Ray Z.	
RS 17	Booster	16 hrs.	Grout cracks in tunnel floor	Ray Z.	
C 18	913, 914, 927	6 hrs.	Tree trimming around cable trays.	Ray Z.	
C 19	RHIC, Air Cond.		1005C - Check out Mitsubishi condenser fan operation.	John B. PE - McKay	

1005 - Install air-compressor intercooler  
 1002A - Repair air compressor cylinder  
 1008B - Repair Chiller  
 1000P - PM: injection tunnel dehumidifier  
 1002,4,6,8,10,12 - PM's: All air-compressors  
 All alcoves - Checkout all Mitsubishi evap. blowers

<b>C</b>	20	RHIC Roofs	16 hrs.	Place radiation signs and barriers on roofs - Rad. Control Group	John B. Carpenters
<b>C</b>	21	RHIC		Check all tunnel telephones	John B.
<b>C</b>	22	RHIC		Relamp entire ring as required. Replace failed auto-lighting contactors.	John B. - Bernier
<b>C</b>	23	RHIC	48 hrs.	Grout/seal floor to wall rain water intrusions at 11 O'clock.	John B. - PE
<b>C</b>	24	RHIC	4 wks.	Paint entire tunnel floor plus beam transport components at Sectors 3,4,8,9,10,11	John B. - PE
<b>C</b>	25	RHIC	20 hrs.	Install filters on intake vents in support bldgs.	John B. - Carpenters
<b>C</b>	26	928 Roof		Replace roofing	Ray Z. / PE



**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: POWER DISTRIBUTION: D. Bastedo (Ext. 2555) [0274], T. Nehring (Ext. 5275) [4246]**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
RS 1		40 hrs.	Repair 13.8 kV feed between Sub's E & 3F		
RS 2		40 hrs.	Repair 13.8 kV feed between Sub's G & H		
RS 3		30 hrs.	GE breakers replacement in Westinghouse room		
C 4		40 hrs.	Westinghouse breakers replacement in Westinghouse room		
RS 5		20 hrs.	Replace battery in Westinghouse room		
C 6		16 hrs.	Replace insulators in 1006 Switch line-up		
C 7		16 hrs.	Replace insulators in 1008 Switch line-up		
C 8		16 hrs.	Replace insulators in 1004D switch		
RS 9		40 hrs.	Install heaters in OH line switches		
C 10		80 hrs.	Install pad mounted switch for RF	PE	
C 11		40 hrs.	Install feed from OH line to RF pad mounted switch	PE	
RS 12		640 hrs.	Install new C substation		
C 13		640 hrs.	Install new 1002B substation	PE	
C 14		32 hrs.	Install new 15kV feed to 1002B	PE	
C 15		640 hrs.	Install new ductbank under U line	PE	
C 16		640 hrs.	Install new feed to Linac	PE	
C 17		640 hrs.	Install new ductbank under U line	PE	
C 18		80 hrs.	Install receptacles for cryo in 1005H		
IP 19		160 hrs.	Clean cryo mcc in compressor bldg.		
IP 20		160 hrs.	Clean cryo mcc in refrigeration bldg.		
IP 21		160 hrs.	Install ups mod for cryo in 1002, 1006, 1010		
RS 22		80 hrs.	Inspect cryo compressor motors		
RS 23		32 hrs.	Repair cable at 921		
RS 24			Repair radiator on transformer 1004B		
C 25		160 hrs.	Relamp RHIC		
C 26		80 hrs.	Relamp AGS		

<b>RS</b>	27	160 hrs.	Lighting in WAH 1006
<b>RS</b>	28	320 hrs.	Replace damaged cables in target bldg.
<b>IP</b>	29	80 hrs.	Put snake cables in tray 1010
<b>C</b>	30		Install duct heater at 1008 gas trailer
<b>C</b>	31	160 hrs.	Install conduit from 911 to 930 for BAF
<b>RS</b>	32	160 hrs.	Install conduit from 911 to H10
<b>RS</b>	33	16 hrs.	Repair Exhaust fan in AGS-RF switchgear
<b>RS</b>	34	80 hrs.	Install UPS for Siemens Cycloconverter
<b>C</b>	35		Remove old "C" substation
<b>C *</b>	36		Repair 15kV Switch @ 1008
<b>C *</b>	37		Maintain 480 V Swgr @ 1008 (subst. 1008A)
<b>C *</b>	38		Re-Lighting in 919A

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: PULSED POWER: R. Zapasek (Ext. 2189) [4263], A. Zhang (Ext. 5369) [7248]**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS</u></b>	<b><u>EST.</u></b>	<b><u>JOB DESCRIPTION AND</u></b>	<b><u>ADD'L.</u></b>	<b><u>HP</u></b>
<b><u>C</u></b>	<b><u>TO</u></b>	<b><u>HRS.</u></b>	<b><u>RESPONSIBLE PERSON</u></b>	<b><u>SUPPORT</u></b>	<b><u>SURVEY</u></b>
C 1	Booster	2 days	<b>F3 KICKER</b> , inspect and maintenance as necessary A. Zhang		
C 2	Booster	2 days	<b>F6 SEPTUM</b> , install interlock changes, inspect system. R. Lockey		
C 3	L18A	3 days	<b>L20 SEPTUM</b> , install new output choke. R. Lockey		
C 4	930A	1 day	<b>BOOSTER TUNE METER</b> , install repaired power supply. A. Zhang		
C 5	AGS	2 days	<b>A5 KICKER</b> , inspect and maintenance as necessary. A. Zhang		
RS 6	H10	8 wks.	<b>AUTO LOTO</b> , install control wiring and test. R. Lockey		
IP 7	RHIC 1010	2 wks.	<b>ABORT KICKER</b> , clean up PLC wiring, system maintenance, inspect PFN's. J. Mi		
RS 8	AGS	??	<b>TUNE METER</b> , assist with new sys ? J. Mi		
RS 9	AGS	??	<b>FEB BUMPS</b> , new config. J. Mi		

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: RF: N. Laloudakis (Ext. 7177 [4261], M. Brennan (Ext. 3755)**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
<b>AGS</b>					
<b>C</b> 1	AGS Ring		Repair Station BC (Replace power tube)	Pump Room	Yes
<b>C</b> 2	AGS Ring		Troubleshoot and repair station b (Ground fault).	No	Yes
<b>C</b> 3	AGS Ring		Install Gap Short relays in all stations	No	Yes
<b>C</b> 4	AGS Ring		Test and or replace feedback amp tubes	No	Yes
<b>C</b> 5	AGS Ring		Replace all air filters	No	Yes
<b>C</b> 6	AGS Ring		Replace or clean water filters	Pump Room	Yes
<b>BOOSTER</b>					
<b>C</b> 1	Booster Ring		Replace all Air Filters	No	Yes
<b>C</b> 2	Booster Ring		Replace or clean water filters	Pump Room	Yes
<b>RHIC</b>					
<b>C</b> 1	RHIC and 1004A		Test the 197 Mhz (Storage) till October 15, 2000	No	No
<b>IP</b> 2	RHIC		Complete the installation of 197 Mhz system in common area	Yes (Electricians, Pump Room)	No
<b>IP</b> 3	1004A		Modify 28 Mhz PA's air and water interlocks	Pump Room	No

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Vacuum - S. Gill (Ext. 4627) [4164], M. Mapes (Ext. 2841)[4277]**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
<b>IP</b> 1	RHIC	16 hrs.	<u>Sector 7</u> : install CRYSTAL COLLIMATOR... lo/to, vent, remove pipe, installation, pumpdown, leak check.	Beam Comp. Survey	
<b>IP</b> 2	RHIC	4 hrs.	<u>Sector 7</u> : flag installation @ beam scraper..... lo/to, vent, remove pipe, installation, pumpdown, leak check	Beam Comp. Survey	
<b>IP</b> 3	RHIC	16 hrs.	<u>Sector 12 (blue)</u> : install polarimeter ... lo/to, vent, remove pipe, installation, pumpdown, leak check	Beam Comp. Survey	
<b>IP</b> 4	RHIC	8 hrs.	<u>Sector 12 (yellow)</u> : <b>POSSIBLY</b> vent for polarimeter modifications.	Beam Comp.	
<b>C</b> 5	RHIC	4 hrs.	Replace "O" rings in turbo pump forelines.		
<b>IP</b> 6	RHIC	12 hrs.	<u>Sector 2 valve box</u> : replace hi-vac valve (blue and yellow), replace tmp on yellow		
<b>IP</b> 7	RHIC	12 hrs.	<u>Sector 4 valve box</u> : replace rouging valve (blue and yellow)		
<b>IP</b> 8	RHIC	12 hrs.	<u>Sector 12 valve box</u> : replace roughing valve (blue and yellow)		
<b>C</b> 9	RHIC	12 hrs. & fix leaks	<u>Sector 6 valve box (blue &amp; yellow)</u> : repair internal helium leaks, replace tmp on yellow.	Cryo, c.m.s.	
<b>IP</b> 10	RHIC	40 hrs.	<u>Sector 3 (blue/yellow)</u> : install SNAKES... lo/to, vent, remove pipe, remove warm bore sector 3, installation, pumpdown, leak check.	Beam Comp. Survey	
<b>IP</b> 11	RHIC	30 hrs.	<u>Sector 9 (blue/yellow)</u> : install SNAKE... lo/to, vent, remove pipe, installation, pumpdown, leak check, replace & leak check warm bore	Beam Comp. survey	
<b>C</b> 12	RHIC		Check & drain all air lines of water where necessary.		
<b>C</b> 13	RHIC	4 hrs.	<u>Sector 5</u> : Switch sector valves at injection to dry air.		
<b>C</b> 14	RHIC	1 hr.	<u>Sector 9</u> : Check air regulator at Q3 for proper setting.		
<b>C</b> 15	1005	16 hrs.	Locate leak in cold box #3	Cryo	

C	16	RHIC	8 hrs.	Install relief valve guards.		
C	17	AGS-Splitters	40 hrs.	Remove CSTO36 TARGET BOX and install CURRENT X-FMR... lo/to, vent, remove pipe, installation, pumpdown, leak check.	Beam Comp. Survey	M
Can	18	AGS	8 hrs.	<u>Sector "C"</u> : replace servo motor on C-5 IPM... vent box, leak check		M
C	19	AGS	8 hrs.	<u>Sector "E-F"</u> : replace servo motor on E-15 IPM... vent box, leak check		M
C	20	AGS	1 hr.	<u>Sector "E-F"</u> : replace video viewport on E-15 IPM... vent box, leak check		M
Can	21	AGS	4 hrs.	<b><u>POSSIBLY</u></b> vent sector "H-I" for H-20 SEPTUM testing.		M
RS	22	AGS	4 hrs.	<u>HEBT 2</u> : repair roughing valve on turbo		
C	23	AGS-Splitters	40 hrs.	Remove CE010 SEC and install ION CHAMBER... lo/to, vent, installation, pumpdown leak check	Beam Comp. Survey	M
Can	24	AGS	4 hrs.	<b><u>POSSIBLY</u></b> vent sector "A-B" for testing of CURRENT X-FMR... lo/to, vent, pumpdown, leak check		
C	25	Booster	1 week	<b><u>POSSIBLY</u></b> install new HARP in LTB... lo/to, vent, installation, pumpdown, leak check, <b>BAKEOUT</b>	Beam Comp. Survey	M
C	26	Booster	1 week	Install new FLAG and RGA HEAD in BTA... lo/to, vent, installation, pumpdown, leak check, <b>BAKEOUT</b>	Beam Comp. Survey	M
C	27	Booster		<u>Sector "F"</u> : install new F-6 SEPTUM... lo/to, vent, remove existing SEPTUM, installation, pumpdown, leak check, <b>BAKEOUT</b>	Beam Comp. Survey, Rigging	M
C	28	Booster		<u>Sector "F"</u> : install new F-6 FLAG... lo/to vent, remove, installation, pumpdown, leak check, <b>BAKEOUT</b>	Beam Comp. Survey	M
C	29	Booster		<u>Sector "F"</u> : install spare F-6 QUARTER CELL... lo/to, vent remove existing QUARTER CELL, install spare, pumpdown, leak check, <b>BAKEOUT</b>	Beam Comp. Survey, Rigging	M
C	30	Booster		<u>Sector "F"</u> : install spare F-7 HALF CELL... lo/to, vent, remove existing HALF CELL, install spare, pumpdown, leak check, <b>BAKEOUT</b>	Beam Comp. Survey, Rigging	M
C	31	Booster		<u>Sector "F"</u> : install new RGA HEAD at F-8 location... lo/to, vent, installation, pumpdown, leak check, <b>BAKEOUT</b>		M
C	32	Booster		Check & drain all air lines of water where necessary		

<b>IP</b>	33	RHIC		<u>Sector 1</u> : vent Q3-Q4 for IPM's, possible additional BPM's.	Beam Comp. Survey	M
<b>IP</b>	34	RHIC		<u>Sector 2</u> : vent Q3-Q4 for IPM's, possible additional BPM's.	Beam Comp. Survey	M
<b>C</b>	35	RHIC		<u>Sector 1 &amp; 2</u> : bakeout DX-D0		M
<b>IP</b>	36	RHIC		<u>IP 4</u> : vent for installation of fast quad & AC dipoles, and modification to common cavities.	Beam Comp. Survey	M
<b>IP</b>	37	RHIC		<u>IP 6</u> : vent for removal of STAR and re-install/ bakeout in February.		M
<b>IP</b>	38	RHIC		<u>IP 8</u> : vent for install of south Muon arm & install/bakeout in February		M
<b>C</b>	39	BLIP	8 hrs.	<b>Possibly</b> assist with replacing beam tube at wall.	BLIP, H.P.	M
<b>Can</b>	40	LINAC	16 hrs.	Assist with replacing ion pumps: 1-4, 6-1, 6-6	LINAC, H.P.	M
<b>C</b>	41	g-2		Install new cryo pump at station #9. Put ring back together.		
<b>RS</b>	42	AGS	52 hrs.	Annual turbo maintenance on all turbo pumps in AGS Ring.		
<b>C</b>	43	AGS	40 hrs.	Vent sector "B" for work on RF Cavity at B-10 (arced 9/9/00 ??).	RF, H.P. Survey	M
<b>C *</b>	44	Atr Line		Remove pipe at W-2 for neutron spallation assess		
<b>C *</b>	45	AGS		Perform supplemental LO/TO on AGS ion pump power supplies.	MCR	
<b>C *</b>	46	Booster		Replace solenoid on s/v 196 (booster-tandem injection valve).		
<b>C *</b>	47	RHIC		Remove blankets on injection magnets at Y injection (sector 5).		
<b>IP *</b>	48			Reinstall pipe at W-2 (neutron spallation)		
<b>C *</b>	49	Booster		Check B3 TSP Filament wire disc. in ring.		
<b>RS*</b>	50	Booster		Repair A7 contactor box - Broken feedthru.		
<b>C *</b>	51	Booster		Check A8 I.G. collector cable disc. in ring.		
<b>C *</b>	52	Booster		Check possible cable short at D-5 I.P.		
<b>C *</b>	53	G-2 & RHIC		Replace filters in equip. racks (clean?).		
<b>C *</b>	54	Booster		Check I.G. controller for BTI 90 – reading 999		

**C-A DEPARTMENT MAINTENANCE, REPAIR AND MODIFICATION PROGRAM**  
**JOBS SCHEDULING REQUEST**

**GROUP: Water Systems: J. deBoer (Ext. 4668 [4250], R. Grandinetti (Ext. 7186 [4239])**

For Maintenance Period: September 19, 2000

<b><u>JOB#</u></b>	<b><u>ACCESS TO</u></b>	<b><u>EST. HRS.</u></b>	<b><u>JOB DESCRIPTION AND RESPONSIBLE PERSON</u></b>	<b><u>ADD'L. SUPPORT</u></b>	<b><u>HP SURVEY</u></b>
C 1	928	160 hrs.	Install manifolds and hose for Siemens Buss	P.E. Plumbers	N/A
C 2	928	24 hrs.	Remove and replace cover on liquid rheostat	Power Group	N/A
C 3	RHIC Bldg. 1004 Tunnel	80 hrs.	Modify water fittings in PA	RF Group	N/A
C 4	928/929 RFMG	200 hrs.	Clean heat exchangers in RFMG on cavity, choke, Rf rectifier power, oil, rheostat and SEM.	None	N/A
C 5	Cooling Towers	150 hrs.	Clean cooling towers 1-7, Linac, RFMG, F-10, Star, Phenix, Brahms, RHIC RF, Phobos, G-2 902 and PTR.	None	N/A
RS 6	1006	24 hrs.	Check operation of star cooling tower drain	PE	N/A
C 7	919A	16 hrs.	Install ethernet card in G-2 controller	J. Gould	N/A
C 8	914 Booster RFMG	480 hrs.	Remove old cooling system controls and install new control upgrade and press control.	P.E. Electricians	RWP 310
RS 9	1002/1010	16 hrs.	Install Saddles for coupons Phobos/Brahms	P.E. Plumbers	N/A
C 10	912 Balcony	80 hrs.	Repair leak on Tower 1 Piping	P.E. Plumbers	N/A
C 11	Star Mer 1006	120 hrs.	Install and test new TPC Controls	P.E. Plumbers	N/A
Can 12	952 T.E. Bldg.	120 hrs.	Repair well water tank drain valve, clean tank and coat interior of tank.	Outside Contractor	N/A
C 13	901	80 hrs.	Rehose MP-7	None	N/A
RS 14	913	80 hrs.	Install new flow meters on PA's in ring	None	RWP
C 15	919	24 hrs.	Repair of PTR domestic water line and installation of plug valve on heat exchanger.	P.E. Plumbers and Mech. Ser.	N/A
C 16	919	16 hrs.	Rebuild RPZ (backflow) in G-2 comp room.	P.E. Plumbers	N/A
C 17	951	60 hrs.	Tie fast pulse quad system in to RFPA PLC for monitoring make up.	None	RWP 310
C 18	930	40 hrs.	Move make-up lines for Linac RF and transport system.	P.E. Plumbers	N/A
C 19	1005	24 hrs.	Change oil in gear boxes and grease motors in Tower 7.		
C 20	CA Complex	16 hrs.	Switch offline pumps for maintenance	None	N/A



<b>C</b>	21	Towers 1,4,7	160 hrs.	Repairs to cooling towers by efficient towers.	Contractor	N/A
<b>C</b>	22	Linac Tower	40 hrs.	Replace gear box, fan assembly and remote Oiler	Contractor	N/A
<b>C</b>	23	Linac 930A	16 hrs.	Verify operations of reference magnet flow switches and flow.	M. Bannon Power Group	N/A
<b>C</b>	24	AGS Ring 913	8 hrs.	Rehose all lines on the I-1 Magnet.	None	Yes
<b>C</b>	25	AGS Ring 913	160 hrs.	Inspect and rehose all magnets cooling lines where required.	None	Yes
<b>C</b>	26	Tower #6 1000P	16 hrs.	Replace tower belts and perform maintenance	None	N/A
<b>C</b>	27	RFPA AGS 913	16 hrs.	Rehose the RFPA station at E	RF Group	Yes
<b>C *</b>	28	AGS Ring 913	2 hrs.	Heat Run	Power Group	Yes
<b>C *</b>	29	AGS Ring 913	6 hrs.	Back flush magnets	None	Yes
<b>C *</b>	30	Booster 914	480 hrs.	F-6 Septum Replacement	C-A Groups	Yes
<b>IP *</b>	31	RHIC RF 1004	320 hrs.	RHIC Common area installation	P.E., Plumbers	